

the coating is irradiated through the backing film and/or after removing the backing film.

Claim 4. The process according to claim 1, wherein the uncured or partially cured coating layer in step b) comprises a coating layer with a tacky surface.

REMARKS

Applicants respectfully request reconsideration of the Office position set forth in the outstanding Office Action mailed December 19, 2002, in light of the foregoing amendments and the following remarks.

Status of the Application

Claims 1-11 are pending in the above-referenced patent application. Per the Official Action dated December 19, 2002, claims 1-11 stand as rejected under 35 U.S.C. §112, second paragraph, claims 1-8, 10 and 11 stand as rejected under 35 U.S.C. §102(b), and claim 9 stands as rejected under 35 U.S.C. §103(a). Support for amended claims 1 and 4 is located on page 6, line 37 through page 7, line 1 of the present specification. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "Version with markings to show changes made".

Rejections Under 35 U.S.C. §112

Claims 1-11 stand as rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. The Examiner asserts the following:

- (1) that in claim 1, step b) and in claim 4, the phrase "an uncured or at least partially cured coating" is unclear and that this limitation is non-limiting because it allows for the coating to be uncured, partially cured, or more than partially cured, and that "at least partially cured" allows for full curing;
- (2) that the term "high", regarding energy in claim 1, step b) line 3 is a relative term;

- (3) that claim 6 is not clear whether the "protective" film is in addition to the coating layer of claim 1b);
- (4) that claim 9 requires the use of UV radiation, however claim 1 requires "high energy" and the Examiner considers UV radiation to be, relatively, "low energy"; and
- (5) that the term "small" in claim 10 is a relative term.

Applicants respond that, in the interests of providing further clarity and advancing prosecution, Applicant has amended claims 1 and 4 to reflect that the coating may be uncured or only partially cured, which is made clear on page 6, line 39 through page 7, line 1, which states "[t]he coating must in no event be completely cross-linked during the drying process."

With respect to claims 1 and 9, Applicant further responds that the term "high," used in reference to "energy," is used to describe the type of radiation used in the curing portion of the present invention. As shown on page 8, lines 22-24, it is shown that the applied coating is "irradiated with high energy radiation, preferably UV radiation," therefore, the UV radiation is indicated to be a type of high energy radiation. In addition, the term "high energy radiation" is one that is well known in the art as shown in U.S. Patent 6,534,130 (Maag et al.) at column 5, lines 48-54, a copy of which accompanies this response.

With respect to claim 6, as shown on page through 7, line 26 through page 8, line 21, the coated backing film may be provided with an optional temporary protective film. The protective film may be present only on the coated side of the backing film, but it may also be applied onto both sides and completely enclose the entire coated backing film.

With respect to claim 10 and use of the term "small", the blemish areas are indeed small because the present invention is for use in spot repair, and page 7 line 38 through page 8, line 4 indicates that the coated films of the present invention may be prefabricated and stored in various shapes and size, for example, in sizes of 0.5 square centimeters to 400 square centimeters, thereby indicating the size of the "small" blemish area.

In light of the amended claims and explanations provided above, Applicants respectfully request that the rejections be withdrawn.

Rejections Under 35 U.S.C. §102

Claims 1-8, 10 and 11 stand as rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,166,007 (Smith et al.). The Examiner asserts that Smith et al. teach a method for repairing vehicles, installations and parts using patch material on a fabric backing and also the preparation of a blemished area to be repaired prior to treating (column 2, line 45; Column 4, line 14).

Applicants respectfully respond that the repair process of Smith et al. is not applicable to spot repairs of a coated surface of a vehicle, particularly not to achieve automotive quality of the repaired surface. Smith et al. indicate that their repair process utilizing the fabrics is for use with the repair of tanks, containers, installations and pipes (see column 1, lines 7-10 and column 2, lines 27-29). Smith et al. make no indication that these articles have or require a smooth and bright finish or appearance without visible marks to the surrounding original coating and with comparable quality to the original coating. On the contrary the present invention obtains smooth, optically flawless surfaces (see page 2, line 32 and page 12, lines 14-17 of the present specification).

Furthermore, Applicants respond that Smith et al. fail to teach or suggest a method utilizing a backing film that is not a fabric. Smith et al. teach only a method using a prepreg fabric that may be impregnated with a photocurable resin, wherein the preferred fabric is a woven fabric (see column 3, lines 40-59, claims 1-4, claims 6-8, claim 12, claim 14, and claims 14-17). In fact, the Examiner acknowledges that in Smith et al. "[b]acking films are coated with one or more photocurable resin impregnated fabric layers...." On the contrary, the process of the present invention does not require the use of a fabric that may be impregnated with a resin, but instead utilizes only a backing film coated on one side with a coating composition, uncured or partially cured, used for repairing the substrate surface (see original and amended claim 1). The backing film in the present invention is not coated with one or more photocurable impregnated fabric layers, but rather with the coating composition itself. The backing film of the present invention is a plastic that meets particular UV transmittance and heat resistance (see Specification page 3, lines 16-18). The specification provides illustrative examples of suitable film materials including, polyolefins, polyamide and polyesters as well as blends of the polymers (see page 3,

lines 23-26). Therefore, Smith et al. do not teach or suggest the present invention, and thus, Applicants respectfully request that the rejection be withdrawn.

Rejections Under 35 U.S.C. §103

Claim 9 stands as rejected under 35 U.S.C. §103(a) as being unpatentable over Smith et al. The Examiner asserts that Smith et al. teach that which is disclosed above regarding the use of UV irradiation to cure a repair resin on a blemished substrate, however, Smith et al. fail to teach an appropriate wavelength range for use in his irradiation process. The Examiner further asserts that selection of a wavelength range would have been dependent upon the type of substrate repaired, the coating materials used and the desired cure time, and thus, it is the Examiner's position that it would have been within the skill of an ordinary artisan to select an optimum wavelength range for UV curing to optimize results of the repair operation.

Applicants respond that, in addition to those arguments presented above in response to the rejection under §102, Smith et al. teach a method wherein impregnated fabrics of woven or fibers are applied to the blemished area and requires the application of the prepreg fabric impregnated with UV-curable resin. However in the present invention a coating layer of a photocurable resin, for example a clear or pigmented one layer top coat, is applied to the blemished area using a removable backing film. This backing film is removed after application/curing in order to avoid spray application of the coating composition to only very small blemished areas. In the present invention only the coating layer remains on the repaired surface. Smith et al. do not teach or suggest that the use of their method results in only the coating composition remaining on the repaired surface, and thus, they do not teach or suggest the present invention.

Furthermore, as stated above, the repair process of Smith et al. utilizing the prepreg fabric is not applicable to spot repairs of a coated surface of a vehicle, particularly not to achieve automotive quality of the repaired surface. Smith et al. indicate that their repair process utilizing the fabrics is for use with the repair of tanks, containers, installations and pipes (see column 1, lines 7-10 and column 2, lines 27-29). Smith et al. make no indication that these articles have or require a smooth and bright finish or appearance without visible marks to the surrounding

original coating and with comparable quality to the original coating. On the contrary the present invention obtains smooth, optically flawless surfaces (see page 2, line 32 and page 12, lines 14-17 of the present specification). Thus, one skilled in the art would not find any incentive or motivation in Smith et al. to result in the present invention.

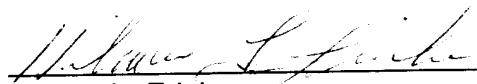
Summary

For all of the reasons noted above, Applicants do not believe that the cited reference renders the Applicants' claimed invention as anticipated under 35 U.S.C. §102, or in the alternative, as obvious under 35 U.S.C. §103. It is respectfully requested that this rejection be withdrawn.

In view of the foregoing remarks, Applicants submit that the Examiner's rejections under §112, §102(b) and §103(a) have been properly traversed, accommodated, or rendered moot, and a full and complete response has been made to the outstanding Office Action dated December 19, 2002. A Notice of Allowance is respectfully solicited. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

There should be no fee due in connection with the filing of this Response. However, should a fee be due which is not accounted for such as a fee under 37 CFR §1.136, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,



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Date: March 17, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, the material to be deleted is in brackets and the material to be inserted is underlined.

AMENDMENTS

Please amend the above-referenced application as follows:

IN THE CLAIMS:

Please AMEND claim 1 as follows:

- Claim 1. (Amended) A process for repairing coated substrate surfaces comprising the following successive steps:
- a) optionally preparing a blemished area to be repaired,
 - b) providing a backing film coated on one side with an uncured or [at least] partially cured coating layer of a coating composition curable by means of high energy radiation,
 - c) applying the backing film with its coated side onto the blemished area to be repaired,
 - d) irradiating the coating applied in this manner onto the blemished area to be repaired with high energy radiation and
 - e) removing the backing film, wherein
the coating is irradiated through the backing film and/or after removing the backing film.
- Claim 4. (Amended) The process according to claim 1, wherein the uncured or [at least only] partially cured coating layer in step b) comprises a coating layer with a tacky surface.